Snozzle

HVLP PAINT SPRAY SYSTEM

AirVerter®

User's Manual

Detach III Snozzle
Model SN-3000

Smith Eastern Corporation

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Compliance • Quality • Performance • Reliability

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Please Read This Owner's Manual *BEFORE* Using Your Detach III™ Snozzle Paint Spray Gun

DO NOT OPERATE THIS EQUIPMENT WITHOUT USING PROPER PERSONAL SAFETY EQUIPMENT INCLUDING RESPIRATOR, GOGGLES AND SAFETY CLOTHING. OBSERVE ALL PRECAUTIONS RELATED TO SPRAYING.

WARNING

THIS EQUIPMENT IS OPERATED USING PRESSURIZED AIR. ALWAYS DISCONNECT SPRAY GUN FROM AIR AND FLUID HOSES AND DEPRESSURIZE SYSTEM PRIOR TO ANY MAINTENANCE OR DISASSEMBLY PROCEDURE.

WARRANTY

Smith Eastern Corporation warrants to the Purchaser that the Detach III™ HVLP Snozzle Paint Spray Gun Model SN-3000 is free from defects in material or workmanship under normal use and service for a period of twelve (12) months from the date of receipt by the Purchaser. Should any failure appear during this period, Smith Eastern shall, if given prompt written notice by the Purchaser, correct such nonconformity by repair or replacement of the nonconforming part, F.O.B. Smith Eastern's repair facility. Repair parts are warranted for ninety (90) days from the date of shipment, but repairs or replacements to original equipment shall not renew or extend the warranty period of such equipment.

Smith Eastern reserves the right to limit this warranty in cases of misuse or abuse. Any modifications to spray guns or recommended procedures will void the warranty.

The foregoing warranty is exclusive and in lieu of other warranties of quality or performance, expressed, implied or statutory, including any warranties of merchantability or of fitness for a particular purpose.

Why AirVerter® Spray Gun Systems Work Better

AirVerter® systems, by design, do not exceed 10 PSI at the spray head and prevent the operator from taking AirVerter® spray guns out of compliance with EPA and California's South Coast Air Quality Management District (SCAQMD) regulations.

EQUIPMENT REQUIREMENTS

Air Compressor

Air compressors used with AirVerter® Spray Guns must be able to HOLD a minimum of 40 PSI while spraying. ***Note***: Position a pressure gauge in the air hose nearest the spray gun to be assured of the PSI required to satisfactorily spray your coating.

High Pressure Air Hose

1. Air hose lengths up to 50 feet **MUST** have an I.D. of 3/8" including fittings.
2. Air hose lengths greater than 50 feet **MUST** have an I.D. of 1/2" including fittings.

Pressure Pot or Diaphragm Pump

The Snozzle **must** be used with a remote pressure pot. Be certain to follow manufacturer's instructions.

ATTACHING THE SNOZZLE EXTENSION TO A DETACH™ III SPRAY GUN

Before spraying, the Detach™ III Spray Gun must be converted to a Snozzle by the following steps:

1. Remove the Air Pressure Fitting (DT-005) and replace it with the Socket Head Cap Screw (DT-004) found in your parts kit.
2. Remove the Air Cap Retaining Ring (AV-101), Air Cap (AV-189).
3. To remove the Fluid Needle (DT-007), first remove the Fluid Control Knob (DT-3012) and Needle Tension Spring (DT-3011). Push the Needle Guide Sleeve (DT-030) back against the handle casting and withdraw the Needle from the rear of the gun.
4. Remove the Fluid Nozzle (DT-3006) from the Fluid Tube (DT-3402) and replace it with the Snozzle Fluid Tube (SN-203).
5. Place the Anti-Friction Washer (MF-003) with the larger ID in the Air Cap Retaining Ring (AV-101).
6. Place the Snozzle Adapter Collar (SN-101) and Atomizing Air Tube (SN-102) into the Air Cap Retaining Ring (AV-101).
7. Place the other Anti-Friction Washer (MF-003) into the Air Cap Retaining Ring (AV-101), insert the Snozzle Fluid Tube (SN-203) into the Atomizing Air Tube (SN-102) and attach the Air Cap Retaining Ring (AV-101) to the Spray Head Housing (DT-3403).
8. Taking care not to bend the Snozzle Needle Assembly (SN-104), insert the Needle through the rear of the handle casting and the Needle Guide Sleeve (DT-030) into the Fluid Assembly. Place the Needle Tension Spring (DT-3011) onto the Needle and secure in place with the Fluid Control Knob (DT-3012).
9. Attach selected spray head to the front of the Snozzle Atomizing Air Tube. (*Hint:* Retract Needle using the trigger action while installing Spray Head. This helps protect the Needle tip from damage.)
10. Attach an air supply hose to the fitting (AV-220A) at the base of the gun handle.
11. Attach the fluid hose from your pressure pot to the Fluid Fitting (DT-3113) on the gun and tighten.

OPERATING INSTRUCTIONS

1. The Detach III™ Model SN-3000 Snozzle Spray Gun operates with the trigger controling both the air and the fluid flow.
2. **Too much pressure will create unnecessary overspray!**

Before Spraying

1. Follow the *Air and Paint Management Guidelines* listed on the following page.
2. Before paint is poured into the cup or diaphragm pump, **make certain paint is properly mixed**. This is particularly true when mixing multi-component paints. Use a paint shaker, rotary mixer, or paint paddle to achieve a homogeneous mixture. (*Hint:* Split your paint into two parts; the top will be lighter and the bottom will be heavier. Completely stir the bottom half of the paint and slowly add small amounts of the top half into the heavier bottom.)
3. **Strain your paint to remove impurities**. Use a cone strainer or a 100-mesh nylon bag or equivalent strainer.
4. **Thin your paint** according to the manufacturer's specifications.
5. **Ensure needle packings are properly adjusted**. Needle packings are preset at the factory to proper tension. However, use and cleaning may alter this setting. To adjust needle packings to proper tension:
6. With gun disconnected from air and fluid sources, pull trigger to move the needle out of the nozzle.

Spraying

1. Air pressure forces paint from the paint container into the fluid chamber of the gun and out through the nozzle where the flow of atomizing air breaks the paint stream into tiny particles, creating the spray.
   a. Needle position controls the amount of paint flowing through the fluid nozzle.
   b. Trigger action controls needle position.
   c. The Fluid Control Knob at the rear of the spray gun controls trigger action. Turning the knob to the right will reduce the fluid flow, turning it to the left increases the flow.
2. If you are having problems with the operation of your paint gun, check the Trouble Shooting Guide at the end of the manual for possible causes and solutions.

SPRAY HEAD SELECTION GUIDE

Spray Head	Application
SN-026R	Rotating Precision Head Assembly - Round pattern. Allows the painter to spray at any angle.
SN-027	Rotating Fan Head Assembly - Flat fan pattern. Allows the painter to spray at any angle.
SN-029	Hatch channel 3/8" Round Head - Round pattern. Designed to reach behind hatch combings.
SN-030	Internal Pipe Head - 360 Degree Spray Pattern.
SN-031	Channel 180-Degree Head. Similar to SN-026R but able to reach further away from the gun extension tube.
SN-032	Point Head (Rotating, 90 degree Spray pattern). Sprays 90 degrees from the extension tube.
SN-033	Point Head (Non-rotating, Straight Pattern). Sprays directly to the front of the Snozzle
SN-037	Non-rotating 90 Degree Point
SN-040	MacroFlex – Fan pattern. Flexible spray head allows the painter to get around and behind obstructions

AIR AND PAINT MANAGEMENT GUIDELINES

Approximate PSI	Application
Thin Coatings ZAHN #2 Test: 16 to 22 seconds Minimum 40 PSI compressor pressure	Machines and implements, small parts, plant maintenance, controlled production work, work in enclosed areas with poor ventilation, priming.
Thin to Medium Coatings ZAHN #2 Test: 22 to 30 seconds 40 to 60 PSI compressor pressure	Dual gun work for all of the above listed applications – will support up to 50’ of 3/8” ID hose for each gun. Also for higher production levels of all of the above.
High Solid Coatings ZAHN #3 Test: 37 + seconds 50 to 70 PSI compressor pressure	Marine epoxies, marine enamels, high production steelwork, high production with conveyer lines, large surfaces with thinner viscosity material, latex on wood or metal.
80% Solids Coatings 60 to 80 PSI compressor pressure	Ultra high production levels on extremely large surfaces; un-thinned epoxies, enamels, latex, urethane.

WARNING

Gun must be de-pressurized prior to any maintenance or disassembly procedure. Disconnect all air and fluid hoses prior to performing any maintenance operation.

CLEANING

Cleaning the Detach III™ Snozzle Spray Gun

1. The Detach III™ gun is the only spray gun that allows you to clean the fluid section of the gun without immersing the entire gun in solvent.
   a. Unscrew the Connector Stud (DT-015).
   b. Pull the Spray Head (DT-3403) forward away from the handle and off the Fluid Needle (SN-104). **Use caution to avoid damaging or bending the needle**.
   c. Wipe the needle and handle clean with solvent and a clean soft cloth.
   d. Remove the Pattern Control Ring (AV-101) and Snozzle Adapter/Atomizing Air Tube Assembly (SN-101/SN-102). Take care not to lose the Anti-Friction Washers (MF-003).
   e. With the wrench provided, remove the Snozzle Fluid Tube (SN-203) from the Fluid Tube (DT-3402) and clean thoroughly with brushes.
   f. Place the Spray Head into a container of solvent.
   g. Use round brush to clean Needle Packings (BCR-043).
   h. Inspect to make certain that all paint residue has been removed.
   i. Wipe all parts dry with clean cloth and reassemble.
   j. Replace Snozzle Fluid Tube into the Fluid Tube and tighten.
   k. When reattaching the Spray Head to the Gun Handle, first carefully insert the needle into the needle packing and gently push the Gun Handle onto the Spray Head.
   l. Insert the Connector Stud assembly and tighten.
   m. Replace Snozzle Adapter/Atomizing Air Tube, Anti-Friction Washers and Pattern Control Ring on the Fluid Assembly

If using a gun cleaner, remove Snozzle Fluid Tube, place the Spray Head and Snozzle Fluid Tube in the cleaner and cycle. Then follow instructions above making sure all parts are clean and dry before re-assembly.

SPRAY GUN PERFORMANCE IS DIRECTLY RELATED TO HOW WELL THE GUN IS CLEANED AFTER USE

Cleaning Ancillary Equipment

1. If using a 2-Quart Cup, be sure to clean all paint residue from the cup, with particular attention to the gasket and cup lip. (*Hint*: Periodically turning the gasket over prolongs gasket life.)

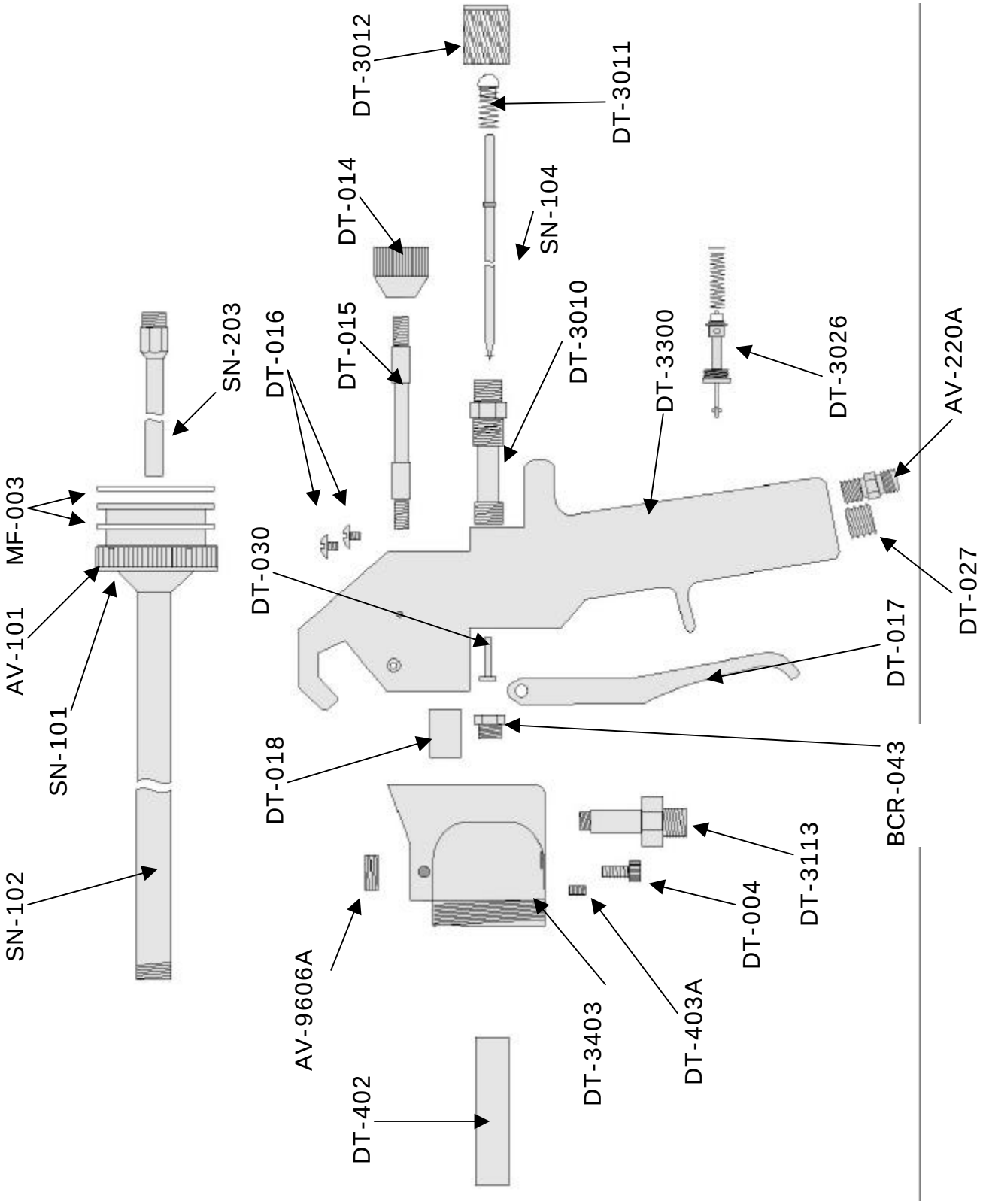
Lubricate

1. Use Vaseline or a non-silicone grease to lubricate the gun.
2. Lubricate all threaded connections for ease of maintenance.
3. Lubricate the Needle only where it passes through the needle packings.
4. **DO NOT** allow lubricant to get into the Fluid Tube, Nozzle, Air Cap, or interior of the paint chamber (areas where paint may come in contact with lubricant).

Wear Items

Replace the O-Rings in the spray head assembly when they become worn, or broken. Different O-Ring materials respond differently to various solvents. If you are having trouble with your O-Rings because of dissolving in solvents, please call us at 1-800-937-4857 or e-mail to snozzle@airverter.com to assist you in finding an appropriate O-Ring for your application.

Detach III™ SNOZZLE PAINT SPRAY GUN
MODEL SN-3000
ILLUSTRATED PARTS BREAKDOWN



Detach III™ SNOZZLE PAINT SPRAY GUN
MODEL SN-3000
PARTS LIST

Part#	NSN	Description
AV-101*	4940-01-353-8802	Pattern Control Ring
AV-220A	-	Male Nipple, ¼ NPT – ¼ Ball
AV-9606A	4940-01-439-9986	Pattern Control Valve Plug
DT-004	4940-01-457-3985	Socket Head Cap Screw
BCR-043	4940-01-457-3991	Needle Packing Cartridge
DT-3010	4940-01-457-4001	Fluid Needle Guide
DT-3011	4940-01-457-4008	Needle Tension Spring
DT-3012	4940-01-457-4012	Fluid Control Knob
DT-014	4940-01-457-4033	Connector Stud Knob
DT-015	4940-01-457-4034	Connector Stud
DT-016	4940-01-457-3964	Trigger Screws
DT-017	4940-01-457-3981	Trigger
DT-018	4940-01-457-3969	Atomizer Air Connector
DT-3026	4940-01-457-1953	Air Control Valve
DT-027	4940-01-457-1955	Plug, Low Pressure Channel
DT-030	4940-01-457-1959	Needle Guide Sleeve
DT-3113	4940-01-467-7195	Fluid Fitting
DT-3300	4940-01-457-1940	Gun Handle
DT-3402	4940-01-467-7198	Fluid Tube
DT-3403	4940-01-467-7141	Spray Head Housing
DT-403A	-	Set Screw
MF-003*	4940-01-457-3944	Anti-Friction Washers (pair –1 large ID and 1 small ID)
SN-101*	4940-01-457-3447	Snozzle Gun Adapter
SN-102-XX*	Note 1	Snozzle Atomizing Air Tube
SN-203-XX*	Note 1	Snozzle Fluid Tube
SN-104-XX*	Note 1	Snozzle Needle Assembly

Note 1: NSNs for each length (12, 18 & 24 inch) are available. Call 1-800-937-4857

* Parts included in SN-3000A-XX

SN-3227 High Wear Kit

Part #	NSN	Description	Qty
BCR-043	4940-01-489-5986	Needle Packing Cartridge	2
DT-3011	4940-01-457-4008	Needle Tension Spring	1
DT-030	4940-01-457-1959	Needle Guide Sleeve	1
MF-003	4940-01-457-3944	Anti-Friction Washer (pair)	1
SN-411	3120-01-397-0977	Delrin Washer Bearing	1
SN-412	5330-01-395-6307	O-Rings (Bag of 12)	1

Spray Head Selection

(ordered separately)

SN-026R
4940-01-391-7032
Rotating Precision Head Assembly – Round Pattern

SN-027
4940-01-391-8350
Rotating Fan Head Assembly – Flat Fan Pattern

SN-029
4940-01-391-8344
Hatch Channel 3/8-in. Round Head – Round Pattern

SN-031

4940-01-391-7034
Channel 180 Degree Head

SN-040

MacroFlex (flexible spray extension, Fan pattern)

SN-3225 Snozzle Bench Parts Kit

Part#	NSN	Description	Qty
AV-101	4940-01-353-8802	Pattern Control Ring	1
DT-3011	4940-01-457-4008	Needle Tension Spring	1
DT-016	4940-01-457-3964	Trigger Screws	1
SN-104-XX*	Note 1	Snozzle Needle Assembly	1
SN-411	3120-01-397-0977	Delrin Washer Bearing	1
SN-412	5330-01-395-6307	O-Rings (Bag of 12)	1
DT-004	4940-01-457-3985	Socket Head Cap Screw	2
BCR-043	4940-01-457-3991	Needle Packing Cartridge	2
DT-030	4940-01-457-1959	Needle Guide Sleeve	2
MF-003*	4940-01-457-3944	Anti-Friction Washers (pair –1 large ID and 1 small ID)	2

Note 1: Specify length (12, 18 or 24 inch) when ordering

Detach III™ SNOZZLE PAINT SPRAY GUN
MODEL SN-3000
TROUBLESHOOTING GUIDE

Problem	Probable Cause	Remedy
Paint will not flow	1. Blockage in fluid nozzle	1. Clean or replace; strain paint
	2. Loss of air pressure in cup	2. Search for air leaks and check cup gasket
	3. Loose fluid nozzle	3. Tighten
	4. Fluid Hose loose, damaged or clogged	4. Tighten, replace or clean; strain paint
	5. Coating is too thick	5. Thin the coating
	6. Loose Needle Packing	6. Replace packing
Inconsistent Spray Pattern (Spits and Sputters)	1. Running out of paint	1. Fill cup or pot, but never the top ¼
	2. Loose fluid tube	2. Tighten
	3. Loss of fluid pressure	3. Search for air leaks or blockages
	4. Loose needle packing	4. Replace packing
Leakage at Front of Gun	1. Damaged fluid needle	1. Replace
	2. Wrong size fluid needle	2. Replace
	3. Dirty fluid nozzle	3. Clean
	4. Impurities in paint	4. Strain paint
	5. Loose Needle Seat	5. Tighten
	6. Fluid adjustment screwed all the way out	6. Rotate Fluid Control Knob (DT-3012) on rear of gun clockwise
	7. Needle not firmly seated in the nozzle	7. Check for nozzle obstruction
	8. Packing too tight	8. Replace Packing
Distorted Spray Pattern	1. Dirty or damaged air cap	1. Clean or replace
	2. Dirty or damaged fluid nozzle or needle	2. Clean or replace
	3. Fluid nozzle partially clogged	3. Clean
	4. Fluid nozzle not centered with air cap	4. Replace air cap

AirVerter®